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# Ranking Eastern Mediterranean Region Countries (EMRO) based on the Health Impact Indicators Using Multi-criteria Decision Approach

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## ABSTRACT

Health indicators and their determinants are important in appropriate policy making at the national level and throughout the world. This study attempts to explain the health impact indicators and rank the eastern Mediterranean region's countries using the combination approach of TOPSIS-AHP. This study is both descriptive and analytical, and is conducted through cross-sectional methods. In order to weight life expectancy and mortality indicators as impact indicators by AHP, 25 experts completed a paired comparison questionnaire. Expert Choice 11 was used to weight indicators and TOPSIS software was used to rank the countries. Based on the Analytic Hierarchy Process and paired comparisons in health impact indicators, it was found that the highest weight was related to the infant mortality rate (IMR) with a weight of 0.284, and the lowest weight was related to the life expectancy indicator at age 60 with a weight of 0.030. After ranking the countries according to the health impact indicators and by using the TOPSIS method, it was found that Bahrain is the first and Somalia is the last among the studied countries. Existing facilities and potentials shall be guided first to the countries with unsuitable health indicators; these countries shall be focused on more than other countries within the region. The most important strategies that the countries can apply to improve the health indicators are raising awareness about health related issues, eliminating financial barriers that decrease access to health, focusing on inter-sectoral cooperation, and promoting the other sectors to participate.

**Key words:** life expectancy, mortality, Eastern Mediterranean, multi-criteria decision.

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